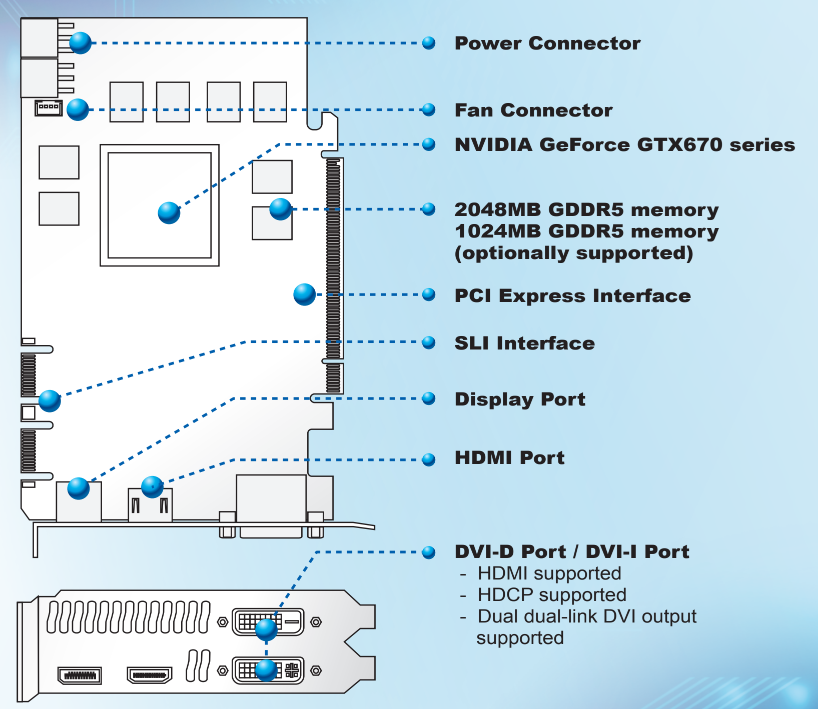
msi
READY FOR 3DMARK 11 The Gamer's Benchmark For DirectX 11
Compatible with Windows 7
msi AFTERBURNER Up To 85% Overclocking Capability
NVIDIA GEFORCE WITH CUDA
HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE
AFTERBURNER
msi

GRAPHICS CARD

N670GTX SERIES

www.msi.com

Overview



★ The VGA card shown here is for reference only, and may vary from the actual card.
For further information, please visit MSI website at www.msi.com

Getting Started

Unpacking

Please check out the following items to make sure that you get the complete product:
- VGA card
- Driver disk, documentation, and accessories, if provided.
  Consult the dealer immediately if the package is not completed.

System Requirements

To install the VGA card, your computer system needs to meet the following requirements:
- PCI Express® - compliant motherboard with one dual-width x16 graphics slot.
- Two 6-pin PCI Express supplementary power connector
- Minimum 500W or greater system power supply(with a minimum 12V current rating of 38A)
  ** Minimum system power requirement based on a PC configured with an Intel Core i7 3.2GHz processor.
- 300MB of available hard disk space
- 2GB system memory (4 GB recommended)
- Microsoft Windows 7, Windows Vista or Windows XP Operating System(32 or 64-bit)
- CD-ROM/ DVD-ROM drive

Card Features

- NVIDIA® 3D Vision™ Ready
  GeForce GPU support for NVIDIA 3D Vision, bringing a fully immersive stereoscopic 3D experience to the PC. A combination of high-tech wireless glasses and advanced software, 3D Vision transforms hdundreds of PC games into full stereoscopic 3D. In addition, you can watch 3D movies and 3D digital photographs in eye popping, crystal-clear quality.
- NVIDIA 3D Vision™ Surround Ready
  Expand your games across three displays in full stereoscopic 3D for the ultimate "inside the game" experience with the power of NVIDIA 3D Vision and SLI technologies. NVIDIA 3D Vision Surround also supports triple screen gaming with non-stereo displays.

  **NVIDIA 3D Version and 3D Version surround requires 3D Vision glasses, and 3D Vision-ready displays. See www.nvidia.com/get3d for more information.
- OpenGL® 4.2 Optimization and Support
  Ensures top-notch compatibility and performance for OpenGL applications.
- OpenCL Support
  Full support for OpenCL GPU computing API.
- NVIDIA® GPU BOOST
- NVIDIA® Adaptive Vertical Sync

Getting Started

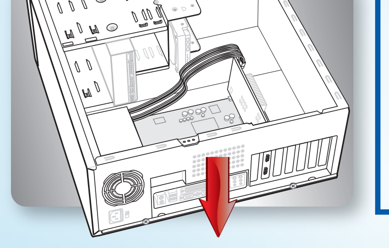
- NVIDIA® SLI™ Technology
  Industry leading NVIDIA SLI technology offers amazing performance scaling by implementing AFR(Alternate frame Rendering) for the world's premier gaming solution under Windows 7 with solid, state-of-the-art drivers.
- Microsoft® DirectX 11 Support
  DirectX 11 GPU with ShaderModel 5.0 support designed for ultrahigh performance in the new API's key graphics feature, GPU-accelerated tessellation.
- Microsoft Windows 7 Support
  Windows 7 is a new generation operating system that will mark a dramatic improvement in the way the OS takes advantage of the graphics processing unit (GPU) to provide a more compelling user experience. By taking advantage of the GPU for both graphics and computing, Windows 7 will not only make today's PCs more visual and interactive but also ensure that they have the speed and responsiveness customers want.
- Two Dual-link DVI with 2560X1600 maximum resolution
  Able to drive industry's largest and highest resolution flat-panel displays up to 2560x1600 and with support for High-bandwidth Digital Content Protection (HDCP).
- HDMI with 4096X 2160 maximum resolution
  Support for HDMI includes GPU-accelerated Blu-ray 3D support (Blu-ray 3D playback requires the purchase of a compatible software player from CyberLink, ArcSoft, Corel, or Sonic), x.v.Color, HDMI Deep Color, and 7.1 digital surround sound. Upgrade your GPU to full 3D capability with NVIDIA 3DTV Play software, enabling 3D gaming, picture viewing, and 3D web video streaming. See www nvidia.com/3dtv for more details.
- NVIDIA® PhysX® - Technology
  Full support for NVIDIA PhysX technology,enabling a totally new class of physical gaming interaction for a more dynamic and realistic experience with GeForce.
- PCI Express 3.0 Support
  Designed for the new PCI Express 3.0 bus architecture offering the highest data transfer speeds for the most bandwidth-hungry games and 3D applications, while maintaining backwards compatibility with existing PCI Express motherboards for the broadest support.
- NVIDIA® CUDA™ Technology
  CUDA technology unlocks the power of the GPU's processing cores to accelerate the most demanding system tasks - such as video transcoding - delivering up to 7x performance over traditional CPUs.
- Support for four concurrent displays, including:
  - Two dual-link DVI
  - HDMI support
  - DisplayPort 1.2
- NVIDIA® TXAA Technology
- NVIDIA® FXAA Technology

Quick Installation

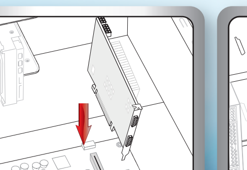
Hardware

Follow the instructions below to install the VGA card:

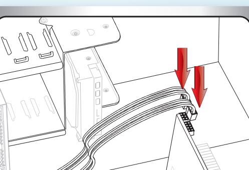
1. Remove the computer case.
2. Locate the expansion slot on your mainboard.
   Warning: Inserting the VGA card into a wrong slot may damage your card (refer to your mainboard manual for further Information).
3. Put the card directly over the expansion slot and press one end of the card into the slot first.
   Gently but firmly press the other end until the card is fully seated in the slot.
4. Secure the card with a bracket screw.
5. Attach the power cable of the power supply with recommended wattage to the VGA card, if necessary.
6. Install all other cards and devices and connect all the cables, and then re-install the computer case.
7. Connect the monitor. Now, you are ready to install the driver and software on your computer.



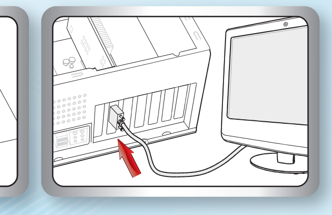
Installing the VGA card...



Attaching the power cable...



Connecting the monitor...



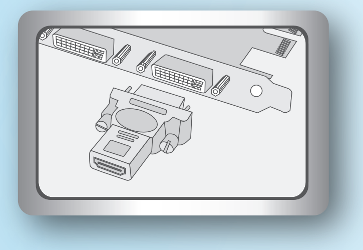
Quick Installation

Enabling HDMI Output

Optionally Supported

Follow the steps below to enable HDMI Output function:

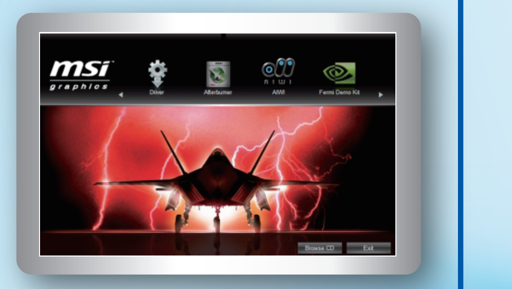
1. Find the DVI-to-HDMI adapter, if provided.
   The adapter may not come with the package, consult your dealer to purchase the adapter, if needed.
2. Attach the DVI-to-HDMI adapter to the DVI connector.
3. Ensure that the adapter is firmly installed.



Software

To install the driver of the VGA card to your computer, please follow the steps below:

1. Turn on the computer.
2. Insert the driver disk into the optical device drive.
   The AUTORUN program will start the Setup program, and show the setup screen as shown on the right.
3. Click the Driver tag, and follow the on-screen instructions to complete the installation.
4. Once the installation is completed, restart the computer as instructed.



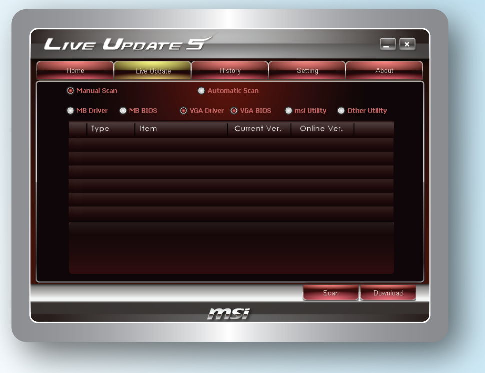
Tip: If, on your computer, the AUTORUN program does not execute automatically, please 1) enable the optical device drive auto-detect function from the Control Panel; or 2) find and run the setup.exe file manually from the driver disk.

msi Functions

LIVE UPDATE 5

MSI Live Update 5 offers users with brand-new update service experience, which can significantly save your time while searching files. Live Update 5 is capable to automatically analyze and list drivers, BIOS, and utilities you need. With the easy-to-use updating approaches, you can increase the performance of your system easily and quickly. Follow the instructions below, with a few mouse clicks, you can acquire the related files for the system updating.

1. Insert the driver disk into the optical device drive, and start the Setup program.
2. Click the Utility tab on the setup screen.
3. Click the MSI Live Update 5.
   Follow the on-screen nstructions to complete the installation.
4. Launch MSI Live Update utility to proceed the updating function.



WARNING!!
DO NOT touch the cooling system since it may produce a certain heat while processing tasks.

CAUTION!!
Do not force the GPU cooler against the fragile GPU to avoid damage to the GPU.

HOT

CE FC N1996

Under the European Union ("EU") Directive on Waste Electrical and Electronic Equipment, Directive 2002/96/EC, which takes effect on August 13, 2005, products of "electrical and electronic equipment" cannot be discarded as municipal waste anymore and manufacturers of covered electronic equipment will be obligated to take back such products at the end of their useful life.

* All trademarks used in this manual are the sole property of their respective owners.

---

msi
Micro-Star INT'L CO., LTD.

Headquarters
Address: No. 69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan
Tel: +886-2-3234-5599 (REP)
Fax: +886-2-3234-5488 (REP)
Website: http://www.msi.com/

Part NO: G52-V2842X1